· D. Fitzgeraid

Page 1 of 7 #14 8/20/00

RAW SEQUENCE LISTING

DATE: 05/31/2000

PATENT APPLICATION: US/09/039,177A

TIME: 13:21:57

Input Set : A:\LUD5539.seq.txt

Output Set: N:\CRF3\05312000\I039177A.raw

ENTERED

```
C--> 3 (1) GENERAL INFORMATION:
             (i) APPLICANT: MIYAZONO, Kohei
                             IMAMURA, Takeshe
                             TEN DIJKE, Peter
            (ii) TITLE OF INVENTION: PROTEINS HAVING SERINE/THREONINE
     10
                                      KINASE DOMAINS, CORRESPONDING NUCLEIC
                                      ACID MOLECULES, AND THEIR USE
     11
           (iii) NUMBER OF SEQUENCES: 29
     13
            (iv) CORRESPONDENCE ADDRESS:
     15
                   (A) ADDRESSEE: Fulbright & Jaworski L.L.P.
     16
     17
                   (B) STREET: 666 Fifth Avenue
     18
                   (C) CITY: New York City
     19
                   (D) STATE: New York
                   (E) COUNTRY: USA
     21
                   (F) ZIP: 10103
             (v) COMPUTER READABLE FORM:
C--> 23
                   (A) MEDIUM TYPE: Diskette, 3.25 inch, 1.44mb
     24
     25
                   (B) COMPUTER: IBM PS/2
     26
                   (C) OPERATING SYSTEM: PC-DOS
     27
                   (D) SOFTWARE: Wordperfect
C--> 29
            (vi) CURRENT APPLICATION DATA:
C--> 30
                   (A) APPLICATION NUMBER: US/09/039,177A
C--> 31
                   (B) FILING DATE: 13-Mar-1998
     32
                   (C) CLASSIFICATION: 435
     67
           (vii) PRIOR APPLICATION DATA:
     35
                   (A) APPLICATION NUMBER: 08/436,265
                   (B) FILING DATE: October 30, 1995
                   (A) APPLICATION NUMBER: PCT/GB93/02367
     40
                   (B) FILING DATE: November 17, 1993
                   (A) APPLICATION NUMBER: GB 9224057.1
     43
                   (B) FILING DATE: November 17, 1992
     44
     47
                   (A) APPLICATION NUMBER: GB 9304677.9
     48
                   (B) FILING DATE: March 8, 1993
     51
                   (A) APPLICATION NUMBER: GB 9304680.3
                   (B) FILING DATE: March 8, 1993
                   (A) APPLICATION NUMBER: 9311047.6
                  (B) FILING DATE: May 28, 1993
                   (A) APPLICATION NUMBER: 9313763.6
                  (B) FILING DATE: July 2, 1993
(A) APPLICATION NUMBER: 9136099.2
     61
     64
     65
                   (B) FILING DATE: August 3, 1993
     68
                   (A) APPLICATION NUMBER: 321344.5
     69
                   (B) FILING DATE: October 15, 1993
     71
          (viii) ATTORNEY/AGENT INFORMATION:
     72
                   (A) NAME: Mary Anne Schofield
                   (B) REGISTRATION NUMBER: 36,669
                   (C) REFERENCE/DOCKET NUMBER: LUD 5539 - JEL/MAS
```

RECEIVEL JUN 16 2000 TC 1600 MAIL ROOM

RECEIVEL JUN 16 2000 TC 1600 MAIL ROOM

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RAW SEQUENCE LISTING DATE: 05/31/2000 PATENT APPLICATION: US/09/039,177A TIME: 13:21:57
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Input Set : A:\LUD5539.seq.txt
Output Set: N:\CRF3\05312000\I039177A.raw

	76		(ix)						NFOR									
	77 (A) TELEPHONE: (212) 318-3000																	
	78 (B) TELEFAX: (212) 752-5958																	
	82 (2) INFORMATION FOR SEQ ID NO: 1: 83 (i) SEQUENCE CHARACTERISTICS:																	
			(1)	_							_							
	84 85			•	,				ase p	parr	5							
	86					ורואגם ורואגם			unkno	nr.rn								
	87			•		POLO				JWII								
	89		/ii\	•	•				uı									
	89 (ii) MOLECULE TYPE: cDNA 91 (iii) HYPOTHETICAL: NO																	
C>	> 93 (iv) ANTI-SENSE: NO																	
	95 (V) FRAGMENT TYPE: internal																	
	97 '(vi) ORIGINAL SOURCE:																	
	98 (A) ORGANISM: Homo sapiens																	
	100 (ix) FEATURE:																	
	101 (A) NAME/KEY: CDS																	
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	108	AGA	AACA	PTT :	rtgc:	rcca(GC C	CCCA	TCCC	A GTO	CCGG	GGAG	GCT(GCCG	CGC (CAGC	rgcgcc	120
	110	GAG	CGAG	CCC (CTCC	CCGG	CT C	CAGC	CCGG'	r ccc	GGGG	CCGC	GCC	GGAC	CCC 2	AGCC(CGCCGT	180
	112	CCA	GCGC'	rgg (CGGT	GCAA	CT G	CGGC	CGCG	C GG'	rgga(GGGG	AGG'	TGGC	CCC (GGTC	CGCCGA	240
		AGG	CTAG	CGC (CCCG	CCAC	CC G	CAGA	GCGG	G CCC	CAGA	GGA						294
	114 AGGCTAGCGC CCCGCCACCC GCAGAGCGGG CCCAGAGGGA CC ATG ACC TTG GGC 115 Met Thr Leu Gly																	
													1		rnr i	Leu (этү	
	116													1			•	
	118								ATG				GCC	1 TTG	GTG	ACC	CAG	342
	118 119	Ser					Leu		ATG Met			Met	GCC	1 TTG	GTG	ACC	CAG Gln	342
	118 119 120	Ser 5	Pro	Arg	Lys	Gly	Leu 10	Leu	Met	Leu	Leu	Met 15	GCC Ala	1 TTG Leu	GTG Val	ACC Thr	CAG Gln 20	
	118 119 120 122	Ser 5 GGA	Pro GAC	Arg CCT	Lys GTG	Gly AAG	Leu 10 CCG	Leu TCT	Met CGG	Leu GGC	Leu CCG	Met 15 CTG	GCC Ala GTG	1 TTG Leu ACC	GTG Val	ACC Thr	CAG Gln 20 TGT	342 390
	118 119 120 122 123	Ser 5 GGA	Pro GAC	Arg CCT	Lys GTG	Gly AAG Lys	Leu 10 CCG	Leu TCT	Met	Leu GGC	Leu CCG Pro	Met 15 CTG	GCC Ala GTG	1 TTG Leu ACC	GTG Val	ACC Thr ACG Thr	CAG Gln 20 TGT	
	118 119 120 122 123 124	Ser 5 GGA Gly	Pro GAC Asp	Arg CCT Pro	Lys GTG Val	Gly AAG Lys 25	Leu 10 CCG Pro	Leu TCT Ser	Met CGG Arg	Leu GGC Gly	Leu CCG Pro 30	Met 15 CTG Leu	GCC Ala GTG Val	1 TTG Leu ACC Thr	GTG Val TGC Cys	ACC Thr ACG Thr 35	CAG Gln 20 TGT Cys	390
	118 119 120 122 123 124 126	Ser 5 GGA Gly GAG	Pro GAC Asp AGC	Arg CCT Pro CCA	Lys GTG Val CAT	Gly AAG Lys 25 TGC	Leu 10 CCG Pro	TCT Ser	Met CGG Arg CCT	Leu GGC Gly ACC	CCG Pro 30 TGC	Met 15 CTG Leu CGG	GCC Ala GTG Val	1 TTG Leu ACC Thr	GTG Val TGC Cys	ACC Thr ACG Thr 35 TGC	CAG Gln 20 TGT Cys	
	118 119 120 122 123 124 126 127	Ser 5 GGA Gly GAG	Pro GAC Asp AGC	Arg CCT Pro CCA	Lys GTG Val CAT His	Gly AAG Lys 25 TGC	Leu 10 CCG Pro	TCT Ser	Met CGG Arg	Leu GGC Gly ACC	CCG Pro 30 TGC	Met 15 CTG Leu CGG	GCC Ala GTG Val	1 TTG Leu ACC Thr	GTG Val TGC Cys	ACC Thr ACG Thr 35 TGC	CAG Gln 20 TGT Cys	390
	118 119 120 122 123 124 126 127 128	Ser 5 GGA Gly GAG Glu	GAC Asp AGC Ser	CCT Pro CCA Pro	Lys GTG Val CAT His 40	Gly AAG Lys 25 TGC Cys	Leu 10 CCG Pro AAG Lys	TCT Ser GGG Gly	Met CGG Arg CCT Pro	GGC Gly ACC Thr 45	CCG Pro 30 TGC Cys	Met 15 CTG Leu CGG Arg	GCC Ala GTG Val GGG Gly	1 TTG Leu ACC Thr GCC Ala	GTG Val TGC Cys TGG Trp 50	ACC Thr ACG Thr 35 TGC Cys	CAG Gln 20 TGT Cys ACA Thr	390
	118 119 120 122 123 124 126 127 128 130	Ser 5 GGA Gly GAG Glu	GAC Asp AGC Ser	Arg CCT Pro CCA Pro CTG	GTG Val CAT His 40 GTG	Gly AAG Lys 25 TGC Cys	Leu 10 CCG Pro AAG Lys	TCT Ser GGG Gly GAG	Met CGG Arg CCT Pro GGG	GGC Gly ACC Thr 45 AGG	CCG Pro 30 TGC Cys	Met 15 CTG Leu CGG Arg	GCC Ala GTG Val GGG Gly CAG	1 TTG Leu ACC Thr GCC Ala	GTG Val TGC Cys TGG Trp 50 CAT	ACC Thr ACG Thr 35 TGC Cys	CAG Gln 20 TGT Cys ACA Thr	390 438
	118 119 120 122 123 124 126 127 128 130	Ser 5 GGA Gly GAG Glu	GAC Asp AGC Ser	Arg CCT Pro CCA Pro CTG	GTG Val CAT His 40 GTG	Gly AAG Lys 25 TGC Cys	Leu 10 CCG Pro AAG Lys	TCT Ser GGG Gly GAG	Met CGG Arg CCT Pro	GGC Gly ACC Thr 45 AGG	CCG Pro 30 TGC Cys	Met 15 CTG Leu CGG Arg	GCC Ala GTG Val GGG Gly CAG	1 TTG Leu ACC Thr GCC Ala	GTG Val TGC Cys TGG Trp 50 CAT	ACC Thr ACG Thr 35 TGC Cys	CAG Gln 20 TGT Cys ACA Thr	390 438
	118 119 120 122 123 124 126 127 128 130 131 132	Ser 5 GGA Gly GAG Glu GTA Val	GAC Asp AGC Ser GTG Val	CCT Pro CCA Pro CTG Leu 55	CAT His 40 GTG Val	Gly AAG Lys 25 TGC Cys CGG Arg	Leu 10 CCG Pro AAG Lys GAG Glu	TCT Ser GGG Gly GAG Glu	Met CGG Arg CCT Pro GGG Gly	GGC Gly ACC Thr 45 AGG Arg	CCG Pro 30 TGC Cys CAC	Met 15 CTG Leu CGG Arg CCC Pro	GCC Ala GTG Val GGG Gly CAG Gln	1 TTG Leu ACC Thr GCC Ala GAA Glu 65	GTG Val TGC Cys TGG Trp 50 CAT His	ACC Thr ACG Thr 35 TGC Cys CGG Arg	CAG Gln 20 TGT Cys ACA Thr GGC Gly	390 438
	118 119 120 122 123 124 126 127 128 130 131 132 134	Ser 5 GGA Gly GAG Glu GTA Val	GAC Asp AGC Ser GTG Val	CCT Pro CCA Pro CTG Leu 55 AAC	Lys GTG Val CAT His 40 GTG Val	Gly AAG Lys 25 TGC Cys CGG Arg	Leu 10 CCG Pro AAG Lys GAG Glu	TCT Ser GGG Gly GAG Glu	Met CGG Arg CCT Pro GGG Gly 60	GGC Gly ACC Thr 45 AGG Arg	CCG Pro 30 TGC Cys CAC His	Met 15 CTG Leu CGG Arg CCC Pro	GCC Ala GTG Val GGG Gly CAG Gln	1 TTG Leu ACC Thr GCC Ala GAA Glu 65 CCC	GTG Val TGC Cys TGG Trp 50 CAT His	ACC Thr ACG Thr 35 TGC Cys CGG Arg	CAG Gln 20 TGT Cys ACA Thr GGC Gly TTC	390 438 486
	118 119 120 122 123 124 126 127 128 130 131 132 134	Ser 5 GGA Gly GAG Glu GTA Val	GAC Asp AGC Ser GTG Val	CCT Pro CCA Pro CTG Leu 55 AAC	Lys GTG Val CAT His 40 GTG Val	Gly AAG Lys 25 TGC Cys CGG Arg	Leu 10 CCG Pro AAG Lys GAG Glu	TCT Ser GGG Gly GAG Glu	Met CGG Arg CCT Pro GGG Gly 60 CTC	GGC Gly ACC Thr 45 AGG Arg	CCG Pro 30 TGC Cys CAC His	Met 15 CTG Leu CGG Arg CCC Pro	GCC Ala GTG Val GGG Gly CAG Gln	1 TTG Leu ACC Thr GCC Ala GAA Glu 65 CCC	GTG Val TGC Cys TGG Trp 50 CAT His	ACC Thr ACG Thr 35 TGC Cys CGG Arg	CAG Gln 20 TGT Cys ACA Thr GGC Gly TTC	390 438 486
	118 119 120 122 123 124 126 127 128 130 131 132 134 135	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys	GAC Asp AGC Ser GTG Val GGG Gly 70	CCT Pro CCA Pro CTG Leu 55 AAC Asn	CAT His 40 GTG Val TTG Leu	Gly AAG Lys 25 TGC Cys CGG Arg CAC His	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg	TCT Ser GGG Gly GAG Glu 75	Met CGG Arg CCT Pro GGG Gly 60 CTC	GGC Gly ACC Thr 45 AGG Arg	CCG Pro 30 TGC Cys CAC His AGG Arg	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80	1 TTG Leu ACC Thr GCC Ala GAA Glu 65 CCC Pro	GTG Val TGC Cys TGG Trp 50 CAT His	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu	CAG Gln 20 TGT Cys ACA Thr GGC Gly TTC Phe	390 438 486
	118 119 120 122 123 124 126 127 128 130 131 132 134 135 136 138	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys GTC Val	GAC Asp AGC Ser GTG Val GGG Gly 70 AAC	CCT Pro CCA Pro CTG Leu 55 AAC Asn	Lys GTG Val CAT His 40 GTG Val TTG Leu TAC	Gly AAG Lys 25 TGC Cys CGG Arg CAC His	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg	TCT Ser GGG Gly GAG Glu 75 GAC	Met CGG Arg CCT Pro GGG Gly 60 CTC Leu	GGC Gly ACC Thr 45 AGG Arg TGC Cys	CCG Pro 30 TGC Cys CAC His AGG Arg	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly TGC Cys	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80 AAC	1 TTG Leu ACC Thr GCC Ala GAA Glu 65 CCC Pro	GTG Val TGC Cys TGG Trp 50 CAT His ACC Thr	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu	CAG G1n 20 TGT Cys ACA Thr GGC G1y TTC Phe TCC Ser	390 438 486 534
	118 119 120 122 123 124 126 127 128 130 131 132 134 135 136 138 139 140	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys GTC Val 85	GAC Asp AGC Ser GTG Val GGG Gly 70 AAC Asn	Arg CCT Pro CCA Pro CTG Leu 55 AAC Asn CAC His	Lys GTG Val CAT His 40 GTG Val TTG Leu TAC Tyr	Gly AAG Lys 25 TGC Cys CGG Arg CAC His TGC Cys	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg TGC Cys 90	TCT Ser GGG Gly GAG Glu 75 GAC Asp	Met CGG Arg CCT Pro GGG Gly 60 CTC Leu AGC Ser	GGC Gly ACC Thr 45 AGG Arg TGC Cys	CCG Pro 30 TGC Cys CAC His AGG Arg	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly TGC Cys 95	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80 AAC Asn	TTTG Leu ACC Thr GCC Ala GAA GAU 65 CCC Pro	GTG Val TGC Cys TGG Trp 50 CAT His ACC Thr	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu GTG Val	CAG Gln 20 TGT Cys ACA Thr GGC Gly TTC Phe TCC Ser 100	390 438 486 534 582
	118 119 120 122 123 124 126 127 128 130 131 132 134 135 138 140 142	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys GTC Val 85 CTG	GAC Asp AGC Ser GTG Val GGG Gly 70 AAC Asn GTG	CCT Pro CCA Pro CTG Leu 55 AAC Asn CAC His	Lys GTG Val CAT His 40 GTG Val TTG Leu TAC Tyr	Gly AAG Lys 25 TGC Cys CGG Arg CAC His TGC Cys	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg TGC Cys 90 ACC	TCT Ser GGG Gly GAG Glu 75 GAC Asp	Met CGG Arg CCT Pro GGG G1y 60 CTC Leu AGC Ser CCT	GGC Gly ACC Thr 45 AGG Arg TGC Cys CAC His	CCG Pro 30 TGC Cys CAC His AGG Arg CTC Leu	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly TGC Cys 95 GAG	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80 AAC Asn	1 TTG Leu ACC Thr GCC Ala GAA GSA CCC CCC CAC His	GTG Val TGC Cys TGG Trp 50 CAT His ACC Thr AAC	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu GTG Val	CAG Gln 20 TGT Cys ACA Thr GGC Gly TTC Phe TCC Ser 100 GAT	390 438 486 534
	118 119 120 122 123 124 126 127 128 130 131 132 134 135 136 138 149 140 142	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys GTC Val 85 CTG	GAC Asp AGC Ser GTG Val GGG Gly 70 AAC Asn GTG	CCT Pro CCA Pro CTG Leu 55 AAC Asn CAC His	Lys GTG Val CAT His 40 GTG Val TTG Leu TAC Tyr	Gly AAG Lys 25 TGC Cys CGG Arg CAC His TGC Cys	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg TGC Cys 90 ACC	TCT Ser GGG Gly GAG Glu 75 GAC Asp	Met CGG Arg CCT Pro GGG Gly 60 CTC Leu AGC Ser	GGC Gly ACC Thr 45 AGG Arg TGC Cys CAC His	CCG Pro 30 TGC Cys CAC His AGG Arg CTC Leu	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly TGC Cys 95 GAG	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80 AAC Asn	1 TTG Leu ACC Thr GCC Ala GAA GSA CCC CCC CAC His	GTG Val TGC Cys TGG Trp 50 CAT His ACC Thr AAC	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu GTG Val ACA	CAG Gln 20 TGT Cys ACA Thr GGC Gly TTC Phe TCC Ser 100 GAT	390 438 486 534 582
	118 119 120 122 123 124 126 130 131 132 134 135 136 138 140 142 143 144	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys GTC Val 85 CTG Leu	Pro GAC Asp AGC Ser GTG Val GGG Gly 70 AAC Asn GTG Val	Arg CCT Pro CCA Pro CTG Leu 55 AAC Asn CAC His CTG Leu	Lys GTG Val CAT His 40 GTG Val TTG Leu TAC Tyr GAG Glu	Gly AAG Lys 25 TGC Cys CGG Arg CAC His TGC Cys GCC Ala 105	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg TGC Cys 90 ACC Thr	TCT Ser GGG Gly GAG Glu GAG GAC Asp CAA	Met CGG Arg CCT Pro GGG Gly 60 CTC Leu AGC Ser CCT Pro	GGC Gly ACC Thr 45 AGG Arg TGC Cys CAC His	Leu CCG Pro 30 TGC Cys CAC His AGG Arg CTC Leu TCG Ser 110	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly TGC Cys 95 GAG Glu	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80 AAC Asn	1 TTG Leu ACC Thr GCC Ala GAA Glu 65 CCC Pro CAC His	GTG Val TGC Cys TGG Trp 50 CAT His ACC Thr AAC ASn	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu GTG Val ACA Thr 115	CAG G1n 20 TGT Cys ACA Thr GGC G1y TTC Phe TCC Ser 100 GAT Asp	390 438 486 534 582 630
	118 119 120 122 123 124 126 130 131 132 134 135 136 138 139 140 142 143 144	Ser 5 GGA Gly GAG Glu GTA Val TGC Cys GTC Leu GGC	Pro GAC Asp AGC Ser GTG Val GGG Gly 70 AAC Asn GTG Val	Arg CCT Pro CCA Pro CTG Leu 55 AAC Asn CAC His CTG Leu CTG	Lys GTG Val CAT His GTG Val TTG Leu TAC Tyr GAG Glu GCC	Gly AAG Lys 25 TGC Cys CGG Arg CAC His TGC Cys GCC Ala 105 CTG	Leu 10 CCG Pro AAG Lys GAG Glu AGG Arg TGC Cys 90 ACC Thr ATC	TCT Ser GGG Gly GAG Glu 75 GAC Asp CAA Gln CTG	Met CGG Arg CCT Pro GGG G1y 60 CTC Leu AGC Ser CCT	GGC Gly ACC Thr 45 AGG Arg TGC Cys CAC His CCT Pro	Leu CCG Pro 30 TGC Cys CAC His AGG Arg CTC Leu TCG Ser 110 GTG	Met 15 CTG Leu CGG Arg CCC Pro GGG Gly TGC Cys 95 GAG GGlu CTG	GCC Ala GTG Val GGG Gly CAG Gln CGC Arg 80 AAC Asn CAG Gln GCC	1 TTG Leu ACC Thr GCC Ala GAA Glu 65 CCC Pro CAC His CCG Pro	GTG Val TGC Cys TGG Trp 50 CAT His ACC Thr AAC Asn GGA Gly	ACC Thr ACG Thr 35 TGC Cys CGG Arg GAG Glu GTG Val ACA Thr 115 GCC	CAG G1n 20 TGT Cys ACA Thr GGC G1y TTC Phe TCC Ser 100 GAT Asp	390 438 486 534 582

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148				120					125					130			
	GTG	GCC	CTG		GTC	CTG	GGC	CTG		CAT	GTC	CGA	CGG		CAG	GAG	726
															Gln		
152			135	-			•	140	-			-	145	_			
154	AAG	CAG	CGT	GGC	CTG	CAC	AGC	GAG	CTG	GGA	GAG	TCC	AGT	CTC	ATC	CTG	774
155	Lys	Gln	Arg	Gly	Leu	His	Ser	Glu	Leu	Gly	Glu	Ser	Ser	Leu	Ile	Leu	
156	_	150	_	_			155					160					
158	AAA	GCA	TCT	GAG	CAG	GGC	GAC	ACG	ATG	TTG	GGG	GAC	CTC	CTG	GAC	AGT	822
159	Lys	Ala	Ser	Glu	Gln	Gly	Asp	Thr	Met	Leu	Gly	Asp	Leu	Leu	Asp	Ser	
	165					170					175					180	
															CAG		870
	Asp	Cys	Thr	Thr	_	Ser	Gly	Ser	Gly		Pro	Phe	Leu	Val	Gln	Arg	
164					185					190					195		
															GGC		918
	Thr	Val	Ala	_	GIn	Vai	Ala	Leu		Glu	Cys	Val	GTĀ		Gly	Arg	
168	m > m	000		200	maa	000	000	mma	205	03.0	com	010	3 C M	210	ccc	C.M.C.	966
															GCC Ala		900
172	TÀT	GIÝ	215	Val	TIP	Arg	GTĀ	220	ттр	птъ	GIY	GIU	225	vai	нта	vai	
	አአሮ	N TO C		TICC	mcc	ACC.	слπ		CAG	TCC	TCC	ጥጥር		CAG	ACT	GAG	1014
															Thr		1014
176	цуз	230	1110	501	501	1119	235	Olu	0111	JCI	115	240	**** 9	0.2 0	****	o L u	
	ATC		AAC	ACA	GTA	TTG		AGA	CAC	GAC	AAC		CTA	GGC	TTC	ATC	1062
															Phe		
	245					250		,		•	255			-		260	•
182	GCC	TCA	GAC	ATG	ACC	TCC	CGC	AAC	TCG	AGC	ACG	CAG	CTG	TGG	CTC	ATC	1110
183	Ala	Ser	Asp	Met	Thr	Ser	Arg	Asn	Ser	Ser	Thr	Gln	Leu	Trp	Leu	Ile	
184			_		265					270					275		
186	ACG	CAC	TAC	CAC	GAG	CAC	GGC	TCC	CTC	TAC	GAC	TTT	CTG	CAG	AGA	CAG	1158
187	Thr	His	\mathtt{Tyr}	His	Glu	His	Gly	Ser	Leu	Tyr	Asp	Phe	Leu	Gln	Arg	Gln	
188				280					285					290			
															GCA		1206
	Thr	Leu		Pro	His	Leu	Ala		Arg	Leu	Ala	Val		Ala	Ala	Cys	
192			295					300			~~-		305	~~~			1054
															AAA		1254
195	ĢΤĀ	310	Ald	HIS	Leu	HIS	315	GIU	TTE	PHE	GIY	320	GIII	GIY	Lys	PIO	
	CCC		ccc	CAC	ccc	CAC		አአሮ	ACC.	ccc	ייי א א		CTC	СТС	AAG	N.C.C	1302
															Lys		1302
	325	110	ALU	1113	LT.	330	I IIC	цуз	JCI	rirg	335	· uı	пси	, ar	шуз	340	
		CTG	CAG	тст	TGC		GCC	GAC	CTG	GGC		GCT	GTG	ATG	CAC		1350
															His		
204				- 1 -	345			1		350					355		
206	CAG	GGC	AGC	GAT	TAC	CTG	GAC	ATC	GGC	AAC	AAC	CCG	AGA	GTG	GGC	ACC	1398
207	Gln	Gly	Ser	Asp	Tyr	Leu	Asp	Ile	Gly	Asn	Asn	Pro	Arg	Val	Gly	Thr	
208		-		360	•				365				-	370			
															ACG		1446
	Lys	Arg	-	Met	Ala	Pro	Glu		Leu	Asp	Glu	Gln		Arg	Thr	Asp	
212			375					380					385				

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214 TGC TTT GAG TCC TAC AAG TGG ACT GAC ATC TGG GCC TTT GGC CTG GTG	
215 Crea Dha Clu Com Mire Free Men Mhe Agn Tlo Men Ala Dha Clu Fau Val	1494
215 Cys Phe Glu Ser Tyr Lys Trp Thr Asp Ile Trp Ala Phe Gly Leu Val	
216 390 395 400	
218 CTG TGG GAG ATT GCC CGC CGG ACC ATC GTG AAT GGC ATC GTG GAG GAC	1542
219 Leu Trp Glu Ile Ala Arg Arg Thr Ile Val Asn Gly Ile Val Glu Asp	
220 405 410 415 420	
222 TAT AGA CCA CCC TTC TAT GAT GTG GTG CCC AAT GAC CCC AGC TTT GAG	1590
223 Tyr Arg Pro Pro Phe Tyr Asp Val Val Pro Asn Asp Pro Ser Phe Glu	
224 425 430 435	
226 GAC ATG AAG AAG GTG GTG TGT GTG GAT CAG CAG ACC CCC ACC ATC CCT	1638
227 Asp Met Lys Lys Val Val Cys Val Asp Gln Gln Thr Pro Thr Ile Pro	
228 440 445 450	
230 AAC CGG CTG GCT GCA GAC CCG GTC CTC TCA GGC CTA GCT CAG ATG ATG	1686
231 Asn Arg Leu Ala Ala Asp Pro Val Leu Ser Gly Leu Ala Gln Met Met	
232 455 460 465	
234 CGG GAG TGC TGG TAC CCA AAC CCC TCT GCC CGA CTC ACC GCG CTG CGG	1734
235 Arg Glu Cys Trp Tyr Pro Asn Pro Ser Ala Arg Leu Thr Ala Leu Arg	
236 470 475 480	
238 ATC AAG AAG ACA CTA CAA AAA ATT AGC AAC AGT CCA GAG AAG CCT AAA	1782
239 Ile Lys Lys Thr Leu Gln Lys Ile Ser Asn Ser Pro Glu Lys Pro Lys	
240 485 490 495 500	
242 GTG ATT CAA TAGCCCAGGA GCACCTGATT CCTTTCTGCC TGCAGGGGGC	1831
243 Val Ile Gln	
245 TGGGGGGGTG GGGGCAGTG GATGGTGCCC TATCTGGGTA GAGGTAGTGT GAGTGTGGTG	1891
247 TGTGCTGGGG ATGGGCAGCT GCGCCTGCCT GCTCGGCCCC CAGCCCACCC AGCCAAAAAT	1951
249 ACAGCTGGGC TGAAACCTGA AAAAAAAAAA AAA	1984
252 (2) INFORMATION FOR SEQ ID NO: 2:	
253 (i) SEQUENCE CHARACTERISTICS:	
254 (A) LENGTH: 503 amino acids	
255 (B) TYPE: amino acid	
256 (D) TOPOLOGY: linear	
258 (ii) MOLECULE TYPE: protein	
260 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:	
262 Met Thr Leu Gly Ser Pro Arg Lys Gly Leu Leu Met Leu Leu Met Ala	
263 1 5 10 15	
OCE The Wall Man Clar Clar Ann Des Wall Ton Des Con Ann Clar Des Tall Wall	
200 Leu vai Thr Gin Gly ASP Pro val Lys Pro Ser Arg Gly Pro Leu Val	
265 Leu Val Thr Gln Gly Asp Pro Val Lys Pro Ser Arg Gly Pro Leu Val 266 20 25 30	
266 20 25 30	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly 269 35 40 45	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly 269 35 40 45 271 Ala Trp Cys Thr Val Val Leu Val Arg Glu Glu Gly Arg His Pro Gln 272 50 55 60	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly 269 35 40 45 271 Ala Trp Cys Thr Val Val Leu Val Arg Glu Glu Gly Arg His Pro Gln	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly 269 35 40 45 271 Ala Trp Cys Thr Val Val Leu Val Arg Glu Gly Arg His Pro Gln 272 50 55 60 274 Glu His Arg Gly Cys Gly Asn Leu His Arg Glu Leu Cys Arg Gly Arg 275 65 70 75 80	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly 269 35 40 45 271 Ala Trp Cys Thr Val Val Leu Val Arg Glu Glu Gly Arg His Pro Gln 272 50 55 60 274 Glu His Arg Gly Cys Gly Asn Leu His Arg Glu Leu Cys Arg Gly Arg	
266	
266 20 25 30 268 Thr Cys Thr Cys Glu Ser Pro His Cys Lys Gly Pro Thr Cys Arg Gly 269 35 40 271 Ala Trp Cys Thr Val Val Leu Val Arg Glu Glu Gly Arg His Pro Gln 272 50 55 60 274 Glu His Arg Gly Cys Gly Asn Leu His Arg Glu Leu Cys Arg Gly Arg 275 65 70 75 80 277 Pro Thr Glu Phe Val Asn His Tyr Cys Cys Asp Ser His Leu Cys Asn 278 85 90 95 280 His Asn Val Ser Leu Val Leu Glu Ala Thr Gln Pro Pro Ser Glu Gln	
266	

RAW SEQUENCE LISTING DATE: 05/31/2000 PATENT APPLICATION: US/09/039,177A TIME: 13:21:57

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Output Set: N:\CRF3\05312000\I039177A.raw

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VERIFICATION SUMMARY DATE: 05/31/2000 PATENT APPLICATION: US/09/039,177A TIME: 13:21:58

Input Set : A:\LUD5539.seq.txt

Output Set: N:\CRF3\05312000\I039177A.raw

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L:23 M:220 C: Keyword misspelled or invalid format, [(v) COMPUTER READABLE FORM:]
L:93 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
L:674 M:220 C: Keyword misspelled or invalid format, [(iv) ANTI-SENSE:]
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L:2820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
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